

E. Petroleum and Petrochemical Products

1. Description and Background of Present Controls
(Provided by Commerce)

2. Effectiveness of Current Controls

a. Petroleum Products
(To be provided by CIA)

b. Petrochemical Products

(1) Present and Foreseeable Needs and Indigenous Capabilities
of Communist Countries

As indicated in Section IV, D, 2, above, purchases of plants and associated technical data from the Free World have enabled the USSR and Rumania to become fairly large producers of petrochemicals and the remaining Communist countries of Eastern Europe to begin such production. Nevertheless, even though domestic production is augmented in many cases by imports, throughout the region there are shortages of nitrogen fertilizers, pesticides, plastics, synthetic rubbers and fibers, detergents, and many other products of petrochemistry. Failure to obtain sufficient supplies of these chemicals forces these countries to continue using substitutes of inferior quality or higher cost. For example, shortages of plastics necessitate continued use of metals, leather, wood, paper, cardboard, cork, and other traditional materials in applications for which plastics are now preferred. Moreover, in cases such as nitrogen fertilizer, for which no practical substitutes are available, these countries are forced to accept the economic losses involved.

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the European Communist countries will need large, additional supplies of petrochemical products. For at least several years, however, indigenous capabilities to design and build the required productive facilities will remain low. As a consequence, purchases of petrochemical plants and technical data from the Free World probably will continue to be substantial. Even so, domestic production of most petrochemicals in all of these countries will fall short of requirements at least through 1970, and imports of selected products will continue.

(2) Imports and Availabilities from Third Countries

Because of the limited regional production of petrochemicals, little trade of this nature is carried on among the European Communist countries. Although a substantial volume and variety of chemicals are traded, most of these chemicals are produced from raw materials other than petroleum or natural gas. There are, of course, some exceptions. For example, the USSR exports to the Communist countries of Eastern Europe such products as carbon black, synthetic rubber, plastics, fertilizers, pesticides, alcohols, benzol, phenol, and acetic acid. All of these chemicals are produced in the USSR at least partly from petroleum refinery products or natural gas. Similarly, part of Rumania's chemical exports to its European Communist neighbors can be considered as petrochemical. The chemicals exported by the remaining European Communist countries are largely of nonpetroleum origin, however.

The European Communist countries import substantial amounts of petrochemicals from the Free World. Although the volume and assortment of products imported varies from year to year and from country to country, in general the imports in recent years have included large amounts of plastics and

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resins, synthetic fibers, nitrogen fertilizers, pesticides, carbon black, synthetic rubber, detergents, and a wide variety of miscellaneous organic chemicals. In 1965, for example, the USSR imported from the Free World petrochemicals valued at about \$100 million, the US share of which amounted to about 13 percent. Other important Free World suppliers of petrochemicals are West Germany, the UK, Italy, Japan, and France. Large amounts of petrochemicals will continue to be available for export from the Free World to the European Communist countries.

(3) Impact of Current Controls on the Communist Countries

As noted earlier in section IV, E, 1, in 1961-66 the US Government denied licenses for exports to the European Communist countries of petrochemicals valued at about \$2.7 million. Transactions involving synthetic rubber accounted for about \$1.9 million or 70 percent of the total denied. The data in this section show also that the value of petrochemical export denials dwindled from about \$1.7 million in 1961 to less than \$2,500 in 1966. The decline in denials, which was accompanied by a substantial rise in approvals, reflected primarily the growing loss of effective unilateral control by the US over exports of many petrochemicals, including most of the synthetic rubbers. To some extent the decline in denials also reflected increased production of petrochemicals in the European Communist countries, the easing of US restrictions on trade with Poland and Rumania, and a somewhat more lenient US attitude toward trade with the remaining European Communist countries.

In the light of the foregoing data, it appears that US unilateral controls

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on exports of petrochemicals currently are having a limited impact on the economic and military capabilities of the European Communist countries. Although hundreds of petrochemicals require validated licenses for export to these destinations, only the following few are now under a presumption for denial: Several types of synthetic rubber (alkyl polysulfides, RTV* and fluorinated silicones, copolymers of methyl vinyl pyridine and butadiene, polyurethane prepolymers, and ethylene-propylene terpolymers), toluene, thiodiglycol, and polyethylene with detectable amounts of boron. With the exception of the RTV and fluorinated silicones and the ethylene-propylene terpolymers, which still appear to be in the research and development stage, these items are being produced or probably can be produced in the USSR. (Except for toluene, no information is available on volume or quality of production.) Moreover, adequate substitutes are available for some of these items in the USSR and some probably can be imported from Western Europe. It is doubtful that any of these items, except toluene, is produced in the ^{European} European Communist countries. Because of less sophisticated military-industrial production, however, these countries at present probably have little or no requirements for most of these items.

Although exports of other petrochemicals may be unilaterally denied or put under a presumption for denial by the US in the future, the number of such cases probably will be small not only because of the growing availability of these commodities from Western Europe and Japan but also because rising

* Room temperature vulcanizable

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production of petrochemicals in the Communist countries, especially the USSR, will lessen the significance of imports and thereby lower the number of cases that meet the criteria for denial.

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